

REMARKS

This Amendment and Response to Non-Final Office Action is being submitted in response to the non-final Office Action mailed June 15, 2005. Claims 1-28, 35, and 36 are pending in the Application. Claims 1, 6-10, 13, and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Merli et al. (U.S. Patent No. 6,088,141) in view of Heiles (U.S. Patent No. 6,701,086). Claims 2-5, 11, and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Merli et al. and Heiles as applied to Claims 1 and 10, and further in view of Yemini et al. (U.S. Patent No. 5,528,516). Claims 15-20, 22-27, and 29-36 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Merli et al. in view of Heiles and Fee et al. (U.S. Patent No. 5,914,794).

Claims 21 and 28 have been allowed.

In response to the above rejections, Claims 1, 5, 10, 11, 15, 20, and 35 have been amended to further clarify the subject matter which Applicants regard as the invention and Claims 2-4, 16, 19, 22-27, and 36 have been canceled (Claims 29-34 having been canceled previously), without prejudice or disclaimer to continued examination on the merits. These amendments are fully supported in the Specification, Drawings, and Claims of the Application and no new matter has been added. Based upon the amendments, reconsideration of the Application is respectfully requested in view of the following remarks.

Rejection of Claims 1, 6-10, 13, and 14 Under 35 U.S.C. 103(a) – Merli et al. and Heiles:

Claims 1, 6-10, 13, and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Merli et al. (U.S. Patent No. 6,088,141) in view of Heiles (U.S. Patent No. 6,701,086).

In response to this rejection, independent Claims 1 and 10 have been amended to recite the elements/limitations of now-canceled dependent Claims 2-4, without prejudice or disclaimer to continued examination on the merits, as follows:

Claim 1. An optical node for an optical network transporting an optical datastream, the node comprising:
at least one port for optically coupling the node to at least one neighboring node;
a fault restoration element to adjust the operation of the node in response to a fault;
at least one optical sensor for measuring a first set of optical characteristics of the optical datastream at the node;
a signal sensor configured to receive a second set of optical characteristics of the optical datastream from an upstream optical device;
and
a local controller correlating the first and second sets of optical characteristics and activating the fault restoration element if the correlated first and second sets of optical characteristics have values corresponding to a potential fault requiring activation of the fault restoration element, ***wherein said controller is a microprocessor having a software program residing on the microprocessor, the software program including a list of possible faults and corresponding restoration actions as a function of the first and second of optical characteristics, wherein said software program records the result of the restoration instance and communicates the result of the restoration instance to the optical network, and wherein said software program communicates a message alerting other nodes of the optical network of an upcoming restoration instance prior to the restoration instance.***

Claim 10. An optical node for an optical network, the node comprising:
at least one input port for receiving an optical data stream having a plurality of channels;
a plurality of output ports for communicating the data stream to at least one other node via at least one optical fiber link;
a line switcher arranged to select an optical pathway for the data stream between two of the ports of the node in response to a line switch command;
a demultiplexing stage arranged to select at least one channel from said datastream, said stage including at least one redundant electro-optic element configured to replace a defective electro-optic element of said stage in response to an equipment switch command;

at least one optical sensor configured to measure a first set of optical characteristics of the channels;

a signal sensor for receiving data from an upstream device on a second set of optical characteristics of the channels upstream of the node; and

a local controller configured to generate the switch commands, the local controller comparing said first and second set of optical characteristics to detect a loss of signal in one or more of the channels, the controller initiating a line switch, based on said comparing, to isolate a line fault or an equipment switch to isolate an equipment fault, ***wherein said controller is a microprocessor having a software program residing on the microprocessor, the software program including a list of possible faults and corresponding restoration actions as a function of the first and second of optical characteristics, wherein said software program records the result of the restoration instance and communicates the result of the restoration instance to the optical network, and wherein said software program communicates a message alerting other nodes of the optical network of an upcoming restoration instance prior to the restoration instance.***

The highlighted elements/limitations, namely the controller being a microprocessor having a software program residing on the microprocessor, the software program including a list of possible faults and corresponding restoration actions as a function of the first and second of optical characteristics, and especially ***the software program recording the result of the restoration instance and communicating the result of the restoration instance to the optical network and the software program communicating a message alerting other nodes of the optical network of an upcoming restoration instance prior to the restoration instance***, are not taught or suggested by Merli et al. or Heiles.

With regard to now-canceled dependent Claims 2-4, Examiner indicates only:

The modified invention of Merli and Heiles disclosed a local node processor but not comprising a microprocessor having a software program residing on said microprocessor for generating the line switch commands. Yemini disclosed an apparatus with fault reporting and event correlation that uses a microprocessor and software (Figure 1a). It would have been obvious to one of ordinary skill in the art to use the Yemini elements in the Merli/Heiles invention since these systems facilitate human

management of increasingly complex network problems (e.g., col./lines: 1/30-45).¹

Thus, Examiner does not directly address the content of now-canceled dependent Claims 2-4, namely that *the microprocessor or the software program records the result of the restoration instance and communicates the result of the restoration instance to the optical network and the software program communicates a message alerting other nodes of the optical network of an upcoming restoration instance prior to the restoration instance*. These elements/limitations are not taught or suggested by Merli et al., Heiles, Yemini et al, or any other reference cited by Examiner.

Merli et al., for example, teach only a network management system 116 (see Figures 1, 2, and 4; column 4, lines 48-53) connected to each of the nodes present, this network management system 116 only receiving information from each node regarding whether that node is normal, a head node, or a tail node (see Figures 6-9). There is no suggestion of communicating the result of a restoration instance to any of the nodes, and especially communicating a message alerting any of the nodes of a restoration instance prior to the restoration instance by Merli et al, Heiles, Yemini et al., or any other reference cited by Examiner.

Therefore, Applicants submit that the rejection of independent Claims 1 and 10 under 35 U.S.C. 103(a) as being unpatentable over Merli et al. in view of Heiles has now been overcome and respectfully request that this rejection be withdrawn and that these claims be allowed. Because Claims 6-9, 13, and 14 are dependent from independent Claims 1 and 10, Applicants respectfully request that the rejection of these claims also be withdrawn and that the claims be allowed.

Rejection of Claims 2-5, 11, and 12 Under 35 U.S.C. 103(a) – Merli et al., Heiles, and Yemini et al.:

¹ Office Action, p. 5, section 5.

Claims 2-5, 11, and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Merli et al. and Heiles as applied to Claims 1 and 10, and further in view of Yemini et al. (U.S. Patent No. 5,528,516).

The above arguments apply with equal force here. It should again be noted that dependent Claims 2-4 have been canceled.

Therefore, because Claims 5, 11, and 12 are dependent from independent Claims 1 and 10, Applicants respectfully request that the rejection of these claims be withdrawn and that the claims be allowed.

Rejection of Claims 15-20, 22-27, and 29-36 Under 35 U.S.C. 103(a) – Merli et al., Heiles, and Fee et al.:

Claims 15-20, 22-27, and 29-36 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Merli et al. in view of Heiles and Fee et al. (U.S. Patent No. 5,914,794).

Independent Claims 15, 20, and 35 have been amended to be consistent with independent Claims 1 and 10. Thus, the above arguments apply with equal force here. In addition, it should be noted that independent Claims 19, 22, and 36 have been canceled, as have dependent Claims 16 and 23-27. Independent Claims 29 and 33, and dependent Claims 30-32 and 34, were canceled previously.

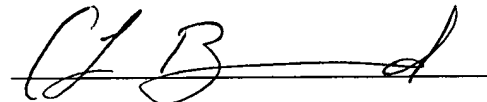
Therefore, Applicants submit that the rejection of independent Claims 15, 20, and 35 under 35 U.S.C. 103(a) as being unpatentable over Merli et al. in view of Heiles and Fee et al. has now been overcome and respectfully request that this rejection be withdrawn and that these claims be allowed. Because Claims 17 and 18 are dependent from independent Claim 15, Applicants respectfully request that the rejection of these claims also be withdrawn and that the claims be allowed.

CONCLUSION

Applicants would like to thank Examiner for the attention and consideration accorded the present Application. Should Examiner determine that any further action is necessary to place the Application in condition for allowance, Examiner is encouraged to contact undersigned Counsel at the telephone number, facsimile number, address, or email address provided below. It is not believed that any fees for additional claims, extensions of time, or the like are required beyond those that may otherwise be indicated in the documents accompanying this paper. However, if such additional fees are required, Examiner is encouraged to notify undersigned Counsel at Examiner's earliest convenience.

Respectfully submitted,

Date: August 29, 2005

A handwritten signature in black ink, appearing to read 'CLB', is written over a horizontal line.

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